Amendments to the Claims

The claims are unamended. The currently pending claims are listed below.

1. (Previously Presented) An apparatus, said apparatus comprising:

a controller, and

a curve matching mechanism that executes under the direction of said controller, said curve matching mechanism receiving curve data as an input, said curve data comprising a plurality of data points representing a curve, said curve matching mechanism using Fuzzy Logic to describe said curve represented by said curve data and to thereby create curve data description information, said curve data description information then being available to said controller.

2. (Original) The apparatus of claim 1 wherein said controller is a Fuzzy Logic controller that executes on a processor.

3. (Original) The apparatus of claim 1 wherein said curve data is time series data.

4. (Original) The apparatus of claim 1 wherein said curve data is described by comparing said curve data to at least one standard curve, said at least one standard curve being a Fuzzy Set.

5. (Original) The apparatus of claim 1 wherein said curve data description information is an output curve.

6. (Original) The apparatus of claim 5 wherein said at least one output curve shows a degree of similarity between said curve data and said at least one standard curve.

7. (Previously Presented) An apparatus, said apparatus comprising:

a Fuzzy Controller that executes on a processor, and

a curve matching mechanism that executes under the direction of said Fuzzy Controller, said curve matching mechanism receiving curve data as an input, said curve data comprising a plurality of data points representing a curve, said curve matching mechanism using Fuzzy Logic to describe said curve represented by said curve data and to thereby create curve data description information, said curve data description information then being available to said Fuzzy Controller, said Fuzzy Controller then using said curve description information to at least partially control said apparatus.

8. (Original) The apparatus of claim 7 wherein said curve data is time series data.

9. (Original) The apparatus of claim 7 wherein said curve data is described by comparing said curve data to at least one standard curve, said at least one standard curve being a Fuzzy Set.

10. (Original) The apparatus of claim 7 wherein said curve data description information is an output curve.

11. (Original) The apparatus of claim 10 wherein said at least one output curve shows a degree of similarity between said curve data and said at least one standard curve.

12. (Previously Presented) An apparatus, said apparatus comprising:

an engine;

a Fuzzy Controller that executes on a processor, said processor being associated with said engine; and

a curve matching mechanism that executes under the direction of said Fuzzy Controller, said curve matching mechanism receiving curve data as an input, said curve data comprising a plurality of data points representing a curve, said curve matching mechanism using Fuzzy Logic to describe said curve represented by said curve data and to thereby create curve data description information, said curve data description information then being available to said Fuzzy Controller, said Fuzzy Controller then using said curve description information to at least partially control said apparatus.

13. (Original) The apparatus of claim 12 wherein said curve data is time series data.

14. (Original) The apparatus of claim 12 wherein said curve data is described by comparing said curve data to at least one standard curve, said at least one standard curve being a Fuzzy Set.

15. (Original) The apparatus of claim 12 wherein said curve data description information is an output curve.

16. (Original) The apparatus of claim 15 wherein said at least one output curve shows a degree of similarity between said curve data and said at least one standard curve.

17. (Original) The apparatus of claim 12 wherein said engine is contained within a vehicle.

18. (Previously Presented) A program product, said program product comprising:

a controller, and

a curve matching mechanism that executes under the direction of said controller, said curve matching mechanism receiving curve data as an input, said curve data comprising a plurality of data points representing a curve, said curve matching mechanism using Fuzzy Logic to describe said curve represented by said curve data and to thereby create curve data description information, said curve data description information then being available to said controller.

19. (Original) The program product of claim 18 wherein said controller is a Fuzzy Logic controller that executes on a processor.

20. (Original) The program product of claim 18 wherein said curve data is time series data.

21. (Original) The program product of claim 18 wherein said curve data is described by comparing said curve data to at least one standard curve, said at least one standard curve being a Fuzzy Set.

22. (Original) The program product of claim 18 wherein said curve data description information is an output curve.

23. (Original) The program product of claim 22 wherein said at least one output curve shows a degree of similarity between said curve data and said at least one standard curve.

24. (Previously Presented) A method, said method comprising the steps of:

receiving curve data as input, said curve data comprising a plurality of data points representing a curve;

describing said curve represented by said curve data using Fuzzy Logic to create curve data description information; and

using said curve data description information to at least partially control an apparatus.

25. (Original) The method of claim 24 wherein said step of at least partially controlling an apparatus is performed by a Fuzzy Logic controller that executes on a processor.

26. (Original) The method of claim 24 wherein said curve data is time series data.

27. (Original) The method of claim 24 wherein said curve data is described by comparing said curve data to at least one standard curve, said at least one standard curve being a Fuzzy Set.

28. (Original) The method of claim 27 wherein said curve data description information is an output curve.

29. (Original) The method of claim 24 wherein said at least one output curve shows a degree of similarity between said curve data and said at least one standard curve.

30. (Previously Presented) A method, said method comprising the steps of:

receiving data representing an input curve as input;

determining membership of said input curve in at least one Fuzzy Set, each said Fuzzy Set expressing a property of a respective at least one curve;

outputting at least one respective input curve membership value representing degree of membership of said input curve in each said Fuzzy Set; and

using said at least one respective input curve membership value to at least partially control an apparatus.